AMENDMENTS TO SPECIFICATION

Please replace the paragraph beginning at page 7, line 8, with the following:

Therefore, for example, when a transmission line is provided with a value $\alpha_T=1.48\times10^{-5}$ (ps/nm^2/km/deg) similar to that of RDF and the optical fiber length is set to L=1000(km), the temperature change is set to $\Delta T=50$(deg) and the wavelength bandwidth is set to $\Delta\lambda=100$(nm), the dispersion change amount difference becomes ~~$\Delta D=62.5$(ps/nm)~~ $\Delta D=74.0$ (ps/nm). That is, even when the dispersion is set to 0 in a total range of the wavelength bandwidth of 100nm at an initial time of operating a WDM transmission system and a variation amount of the dispersion is compensated by an adaptive type dispersion equalizer by the same amount over a total wavelength bandwidth, by the temperature dependency of the dispersion slope, a difference of a dispersion of 62.5(ps/nm) is produced between channels of the shortest wavelength and the longest wavelength. In this case, application to a WDM transmission system (allowable dispersion of about 40ps/nm) of 40Gbit/s/ch becomes difficult.

Please replace the paragraph beginning at page 21, line 13, with the following:

Center wavelengths of a wavelength tunable filter are set one by one for all of wavelength channels by the controller 604 comprising PC (personal computer) and dispersion values are monitored. For example, in a wavelength division multiplexing optical transmission system comprising 32 channels, dispersion values in wavelength channels 1 to 32 (λ_{mon1} to λ_{mon32}) at a certain temperature T_1(°C) are measured and the dispersion values are stored to the controller 604. Next, by measuring dispersion values in λ_{mon1} to λ_{mon32} when a certain other temperature ~~T_1(°C)~~ T_2(°C) is constituted, dispersion variation amounts ΔD_{mon1} to ΔD_{mon32} in all of the wavelength channels λ_{mon1} to λ_{mon32} can be monitored by differences from the dispersion values at temperature T_1(°C) for the respective wavelength channels. By monitoring the dispersion variation amounts of the respective channels, appropriate dispersion compensation amounts in the respective channels can be known.